

ABSTRACT OF THE DISCLOSURE

The present invention provides a method for absorbing and releasing hydrogen which comprises applying repeatedly hydrogen pressurization and depressurization to a hydrogen storage metal alloy of a body-centered cubic structure-type phase exerting a two-stage or inclined plateau characteristic in a hydrogen storage amount vs hydrogen pressure relation in an appropriate fashion to absorb and release hydrogen, and at least at one stage during the release of hydrogen, making the temperature ( $T_2$ ) of the above-mentioned hydrogen storage metal alloy higher than the temperature ( $T_1$ ) of the hydrogen storage metal alloy during the hydrogen absorption process ( $T_2 > T_1$ ), thereby enabling the release and utilization of occluded hydrogen at a low-pressure plateau region or an inclined plateau lower region, which has not been utilized in the prior art. Refer to FIG. 16.

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